

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

S.O.I.TEC SILICON ON INSULATOR
TECHNOLOGIES S.A. and
SOITEC USA, INC.,

JURY TRIAL DEMANDED

Plaintiffs/
Counterclaim
Defendants,

Civil Action No.: 05-806-KAJ

v.

MEMC ELECTRONIC MATERIALS, INC.,

Defendant/
Counterclaim
Plaintiff.

**ANSWER TO (CORRECTED) FIRST AMENDED COMPLAINT
AND COUNTERCLAIM FOR PATENT INFRINGEMENT**

Defendant/Counterclaim Plaintiff MEMC Electronic Materials, Inc. (hereinafter "MEMC") Answers the (Corrected) First Amended Complaint ("First Amended Complaint") of Plaintiffs/Counterclaim Defendants' S.O.I.TEC Silicon on Insulator Technologies S.A. and Soitec USA, Inc. (hereinafter collectively "Soitec") as follows:

1. MEMC admits that Soitec has a reputation for making and selling SOI products.

MEMC is without knowledge or information sufficient to form a belief as to the truth of the remaining averments contained in paragraph 1 and, therefore, denies same.

2. MEMC admits the averments contained in paragraph 2.

3. MEMC admits the averments contained in paragraph 3.

4. MEMC admits the averments contained in paragraph 4.

5. MEMC admits the averments contained in paragraph 5.

6. MEMC admits this Court has subject matter jurisdiction over the First Amended Complaint. MEMC denies any remaining averments contained in paragraph 6.

7. MEMC admits that venue is proper in this judicial district. MEMC denies any remaining averments contained in paragraph 7.

8. MEMC admits the first and third sentences of paragraph 8. MEMC is without knowledge or information sufficient to form a belief as to the truth of the remaining averments contained in paragraph 8 and, therefore, denies same.

9. MEMC admits that Exhibit 1 is a copy of a letter dated October 14, 2004 sent from Dr. Shaker Sadasivam of MEMC to Mr. Emmanuel Huyghe of Soitec and that the terms of the letter speak for themselves. MEMC denies any remaining averments contained in paragraph 9.

10. MEMC admits the first sentence in paragraph 10. MEMC admits that the respective priorities for the '827, '302, '672 and '380 patents each include, at least, a priority claim as to U.S. Provisional Application No. 60/041,845, filed on April 9, 1997. MEMC further admits that the '827 patent was issued subject to a terminal disclaimer. MEMC denies the remaining averments contained in paragraph 10.

11. MEMC admits that the '901 patent was issued to MEMC on February 1, 2005. MEMC admits that the respective priorities for the '901, '104 and '725 patents each include, at least, a priority claim as to U.S. Provisional Application No. 60/098,902, filed on September 2, 1998. MEMC admits that the '901 patent was issued subject to a terminal disclaimer. MEMC denies any remaining averments contained in paragraph 11.

12. MEMC admits that Exhibit 2 to the Complaint is a copy of a letter dated October 21, 2005 from MEMC's Vice President and General Counsel to Soitec, and that the terms of this letter speak for themselves. MEMC denies the remaining averments contained in paragraph 12.

13. MEMC admits that Exhibit 3 is a copy of an email sent from Soitec's General Counsel to MEMC's Vice President and General Counsel dated November 11, 2005, and that the terms of the email speak for themselves. MEMC denies any remaining averments contained in paragraph 13.

14. MEMC admits that Exhibit 4 is a copy of an email sent from MEMC's Vice President and General Counsel to Soitec's General Counsel dated November 18, 2005, and that the terms of the email speak for themselves. MEMC denies any remaining averments contained in paragraph 14.

15. MEMC admits that this Court has subject matter jurisdiction over the First Amended Complaint. MEMC denies any remaining averments contained in paragraph 15.

16. MEMC admits that the parties reached an agreement concerning the six patents identified in paragraph 16 and that the terms of that agreement speak for themselves. MEMC further admits that no agreement was reached with respect to the '104 patent. MEMC admits the last sentence in paragraph 16. MEMC denies any remaining averments contained in paragraph 16.

17. MEMC admits the averments contained in paragraph 17.

18. MEMC admits that this Court has subject matter jurisdiction over the First Amended Complaint. MEMC denies any remaining averments contained in paragraph 18.

19. MEMC admits the averments contained in paragraph 19.

COUNT I

20. MEMC incorporates herein by reference each of its answers to the averments contained in paragraphs 1 through 19 of the First Amended Complaint as set forth above. MEMC denies any remaining averments contained in paragraph 20.

21. MEMC denies the averments contained in paragraph 21.

COUNT II

22. MEMC incorporates herein by reference each of its answers to the averments contained in paragraphs 1 through 21 of the First Amended Complaint as set forth above. MEMC denies any remaining averments contained in paragraph 22.

23. MEMC denies the averments contained in paragraph 23.

COUNT III

24. MEMC incorporates herein by reference each of its answers to the averments contained in paragraphs 1 through 23 of the First Amended Complaint as set forth above. MEMC denies any remaining averments contained in paragraph 24.

25. MEMC admits that a copy of the '104 patent was attached to the First Amended Complaint as Exhibit 5 and that the '104 patent contains claim language having a legal meaning and scope to be determined by this Court following a *Markman* Hearing. MEMC denies that it has made public pronouncements or pronouncements in other lawsuits concerning the claim scope of the '104 patent. MEMC admits that the Czochralski grown CZ silicon donor wafer used by Soitec in deriving its device layers is substantially free of crystal originated particle defects (to the extent of MEMC's testing of donor wafers to date) such that the resulting SOI product is covered by Claims 1, 9 and 10 of the '104 patent. MEMC denies any remaining averments contained in paragraph 25.

26. MEMC is without knowledge or information sufficient to form a belief as to the truth of the averments contained in paragraph 26 and, therefore, denies same.

27. MEMC is without knowledge or information sufficient to form a belief as to the truth of the averments contained in paragraph 27 and, therefore, denies same.

28. MEMC is without knowledge or information sufficient to form a belief as to the truth of the averments contained in paragraph 28 and, therefore, denies same.

29. MEMC admits that MEMC and Soitec discussed entering into a commercial relationship and that discussion points included various terms not relevant to this lawsuit. No agreement was ever reached for such a relationship. MEMC denies the remaining averments contained in paragraph 29.

30. MEMC admits that Dr. Robert Falster is the sole named inventor on the '104 patent and is a leading material scientist at MEMC. MEMC admits that Mr. André-Jacques Auberton-Hervé, the Chief Executive Officer of Soitec, had a conversation with Dr. Falster and discussed Soitec's UNIBOND wafers. MEMC is without knowledge or information sufficient to form a belief as to the truth of the averments contained in the remaining averments of paragraph 30 and, therefore, denies same.

31. MEMC admits that Mr. Auberton-Hervé and Dr. Falster, along with others, had a meeting during which Soitec discussed the problems it was having with its UNIBOND wafers. MEMC denies that Mr. Auberton-Hervé jointly conceived any invention claimed in the '104 patent. Rather, prior to the meeting, Dr. Falster had conceived of the idea of using his wafers containing axially symmetric regions of silicon substantially free of agglomerated intrinsic point defects as the donor wafer to derive the device layer for SOI structures. As such, Dr. Falster's conception of making silicon on insulator structures comprising a handle wafer, an Agglomerate

Free Device Layer, and an insulating layer between the handle wafer and the device layer was complete prior to the October 30, 1996 meeting. MEMC denies any remaining averments contained in paragraph 31.

32. MEMC admits that Soitec and MEMC did not enter into a business partnership. MEMC is without knowledge or information sufficient to form a belief as to the truth of the remaining averments contained in paragraph 32 and, therefore, denies same.

33. MEMC is without knowledge or information sufficient to form a belief as to the trust of the averments contained in paragraph 33 and, therefore, denies same.

34. MEMC is without knowledge or information sufficient to form a belief as to the trust of the averments contained in paragraph 33 and, therefore, denies same.

35. MEMC denies the averments contained in paragraph 35.

COUNT IV

36. MEMC incorporates herein by reference each of its answers to the averments contained in paragraphs 1 through 35 of the First Amended Complaint as set forth above. MEMC denies any remaining averments contained in paragraph 36.

37. MEMC denies the averments contained in paragraph 37.

38. MEMC denies the averments contained in paragraph 38(a). MEMC denies that United States Patent No. 5,919,302 is material prior art to the '104 patent. MEMC states that an analog to the '302 patent containing the same specification was cited to the patent office during prosecution of the '104 patent. MEMC admits that Dr. Falster, MEMC, and the attorneys who prosecuted the '104 patent had knowledge of the '302 patent. MEMC further states that the '302 patent and the '104 patent were commonly assigned at all relevant times. MEMC denies any remaining averments contained in paragraph 38(b). MEMC denies that thermal treatments were

known in the prior art to dissolve or annihilate agglomerated intrinsic point defects in CZ silicon subsequent to their formation. MEMC admits that it was known in the prior art to use epitaxial deposition to make a thin crystalline layer of silicon on the surface of a CZ silicon wafer where just the surface layer was substantially free of agglomerated intrinsic point defects. MEMC denies that silicon produced by the epitaxial prior art technique is "substantially identical" to the silicon disclosed in the '302 and '104 patents. MEMC denies the remaining averments contained in paragraph 38(c). MEMC denies any remaining averments contained in paragraph 38.

39. MEMC denies that it knowingly withheld any material facts or prior art from the PTO during the prosecution of the '104 patent. MEMC denies that Auberton-Hervé has any claim of co-inventorship to the '104 patent. MEMC denies that it had any obligation to advise the patent office of such non-existent claim. MEMC denies that the commonly assigned '302 patent is material prior art to the '104 patent. MEMC states that it cited prior art to the United States Patent Office during prosecution of the '104 patent which disclosed the use of epitaxial layers for the device layer in an SOI structure. MEMC denies the asserted "substantial identity" set forth in paragraph 39(c). MEMC denies any remaining averments contained in paragraph 39.

40. MEMC admits that it has issued press releases and that the terms of those press releases speak for themselves. MEMC admits that its perfect silicon, when used as a donor wafer in deriving a device layer for an SOI structure creates an SOI structure covered by the '104 patent. MEMC denies that Auberton-Hervé has any claim to co-inventorship of the '104 patent. MEMC denies any remaining averments contained in paragraph 40.

41. MEMC admits that a copy of the '104 patent was attached as Exhibit 5 to the First Amended Complaint and that a copy of the '302 patent was attached to the original Complaint filed by Soitec in this matter. As seen from the plain text of these two patents, there is some

common text. None of this common text is material to the validity, infringement and/or enforceability of the '104 patent. MEMC denies that the '302 patent discloses that Prior Art Silicon is substantially identical to MEMC Silicon--indeed they are not substantially identical. MEMC denies that the '302 patent is material prior art to the prosecution of the '104 patent. MEMC denies any requirement or duty to file the '104 patent as a continuation in part of the '302 application. MEMC denies any attempt to mislead the examiner as to the patentability of one or more of the inventions claimed in the '104 application. MEMC admits that the prior art about which Soitec purportedly complains was, in fact, cited to the patent office. MEMC denies Soitec's assertion that MEMC "buried" any prior art. MEMC denies making any disclosure in a misleading manner, and MEMC denies any attempt to deceive the examiner as to the patentability of any invention claimed in the '104 application. MEMC denies any remaining averments contained in paragraph 41.

AFFIRMATIVE DEFENSES

42. U.S. Patent No. 6,236,104 is valid pursuant to 35 U.S.C. §§101, 102, 103 and 112.
43. Soitec directly and indirectly infringes the '104 patent.
44. Soitec's inventorship claims and related unenforceability claims are barred under the doctrine of laches.
45. Soitec is equitably estopped from asserting its inventorship claims and related unenforceability claims.
46. The First Amended Complaint fails to state a claim upon which relief can be granted.

COUNTERCLAIM FOR PATENT INFRINGEMENT

47. This Counterclaim arises under the patent laws of the United States. This Court has subject matter jurisdiction over this Counterclaim under 28 U.S.C. Sections 1331 and 1338(a).

48. Venue for this Counterclaim is proper in this judicial district under 28 U.S.C. Sections 1391(c).

49. MEMC is a corporation organized and in good standing under the laws of Delaware. MEMC has a principal place of business in St. Peters, Missouri.

50. Upon information and belief, S.O.I.TEC Silicon on Insulator Technologies S.A. is organized under the laws of France and has a principal place of business in Bernin, France. Upon information and belief, Soitec USA, Inc. is a wholly owned subsidiary of S.O.I.TEC Silicon on Insulator Technologies S.A. and is a corporation organized under the laws of the Commonwealth of Massachusetts and has a principal place of business in Peabody, Massachusetts. These two Soitec entities are herein collectively referred to as "Soitec."

51. On May 22, 2001, the '104 patent was duly and legally issued to MEMC for an invention entitled, "Silicon on Insulator Structure From Low Defect Density Single Crystal Silicon." At all times since issuance of the '104 patent, MEMC has been and still is the owner of this patent, with the sole right to sue and recover for its infringement.

52. Upon information and belief, Soitec has been and still is infringing, actively inducing infringement of, and knowingly contributing to the infringement of the '104 patent, by making, using, offering to sell, selling and/or importing silicon on insulator structures covered by claims of the '104 patent in the United States in violation of 35 U.S.C. Section 271. Soitec will continue to do so unless enjoined by the Court.

53. MEMC has been damaged by Soitec's infringement of the '104 patent and will continue to be damaged by such infringement in the future unless such infringement is enjoined by the Court.

WHEREFORE, MEMC respectfully prays that this Court enter an Order providing that:

- (a) the '104 patent is not invalid under 35 U.S.C. Sections 101, 102, 103 and 112;
- (b) Soitec has infringed one or more claims of the '104 patent;
- (c) Soitec, and each of their officers, agents, servants, employees, and attorneys, and those persons in active concert or participation with them, be permanently enjoined from further infringement of the '104 patent;
- (d) MEMC be awarded damages in an amount to be determined at trial;
- (e) MEMC be awarded pre-judgment and post-judgment interest;
- (f) judgment be entered against Soitec on each of Counts I - IV of the First Amended Complaint, and that Soitec take nothing by it;
- (g) this is an exceptional case, pursuant to 35 U.S.C. §285, and awarding MEMC enhanced damages, reasonable attorney's fees, expenses and costs in this action; and
- (h) MEMC be granted such other and further relief as the Court deems just and proper in the premises.

JURY TRIAL DEMANDED

Pursuant to Federal Rule of Civil Procedure 38, MEMC demands a trial by jury on all issues so triable.

Dated: May 19, 2006

CONNOLLY BOVE LODGE & HUTZ LLP

By: /s/ Paul E. Crawford

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CERTIFICATE OF SERVICE

I, Paul Crawford, hereby certify that on this 19th day of May, 2006, I electronically filed the **ANSWER TO (CORRECTED) FIRST AMENDED COMPLAINT AND COUNTERCLAIM FOR PATENT INFRINGEMENT** with the Court Clerk using CM/ECF which will send notification of such filing(s) to John L. Reed. I hereby further certify that on this 19th day of May, 2006, I have served this document on the attorneys of record at the following addresses as indicated:

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